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Applicant would like to express thanks for the courteous telephone interview that Examiner Chriss Yoder and Primary Examiner Tuan Ho had with the undersigned Counsel on March 21, 2006.

As summarized at the beginning of the interview, the independent claims at issue are independent method claim 41 (which recites, inter alia, "providing a lens array for projecting said output light onto said object film, and providing an aperture in conjunction with said lens array for high spatial frequency cutoff in the image, said aperture having a shape matched to the pixel pattern of said electro-optical panel"), and independent method claim 76 (which recites, inter alia, "providing a lens array for projecting said illuminated frame on said electronic image sensor, and providing an aperture in conjunction with said lens array for high spatial frequency cutoff in the image, said aperture having a shape matched to the pixel pattern of said image sensor"), as well as independent apparatus claim 65 (which, in apparatus terms, is similar to independent method claim 41) and independent apparatus claim 59 (which, in apparatus terms, is similar to independent method claim 76).

During the interview, Counsel initially observed that the primary citation, Clark U.S. Patent 4,720,637, shows an adjustable circular aperture filter (typical of the prior art) used in conjunction with a rectangular pixel pattern, as illustrated in the Figures 1 and 1A of Clark.

Regarding the secondary citation, Kimura U.S. Patent 5,833,341, Counsel first pointed out that it discloses an illuminating light projector that uses a parabolic reflector

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to produce a collimated circular beam (as in Figure 7 or Figure 12 of the citation) whose outer shape is converted to a square shape by a square mirrored opening (see e.g. Figure 12 of Kimura). The inventive concept in Kimura is to not waste the blocked projector light - it being reflected back to the parabolic mirror so it can then go through the central square opening of the mirrored aperture 104A, 104B, as seen again in Figures 7 and 12.

As argued by Counsel during the interview: In the absence of Applicant's own teachings, and hindsight, why would one skilled in the art take a macroscopic mirrored aperture of Kimura, that is used to form a collimated beam having a square outer shape, and substitute it for the tiny circular aperture filter of Clark (which, indeed, operates near the Nyquist limit!)? There would be absolutely no reason to do so, absent Applicant's own teachings. Not only is the aperture 103 of Kimura not a high spatial frequency cutoff filter, it is merely a device for forming the outer shape of a projector beam.

The foregoing, of itself, should be completely dispositive of the issue. However, Counsel further pointed out that the entire concept of having an aperture, used for high spatial frequency cutoff, that has a shape matched to the pixel pattern of the electro-optic panel (e.g. in Applicant's independent claims 41 and 65) or image sensor (e.g. in Applicant's independent claims 59 and 76) is completely absent from both citations. During the interview, in this regard, the Examiner repeated essentially what he had argued in the passage bridging pages 4 and 5 of the Office Action, namely:

"Also in analogous art, Kimura discloses
the use of an aperture used to shape light for

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an imaging device. Kimura discloses that the shape of the aperture is the same as the imaging device (column 14, lines 32-34; and based on design choice, it is implied that the aperture may be formed in any shape such as rectangular, square, hexagonal, or diamond in order to match the imaging device). Kimura teaches that the use of an aperture shaped the same as the pixel pattern of an imaging device is preferred in order to direct the light on the portion that accepts the light only (column 14, lines 43-45). Therefore, it would have been obvious to one of ordinary skill in the art to modify the primary device to include the use of an aperture shaped in any pattern in order to match the imaging device."

During the interview, Counsel showed why this reasoning is not correct and explained that an aperture filter used for high spatial frequency cutoff does not form the outer shape of a beam. [Consider the circular aperture spatial filter of Clark or any of the high spatial frequency cutoff aperture filter shapes of Applicant in this regard - none of them being used to form the outer shape of a beam. In both cases, lenses are used to focus the beam, and the aperture filter operates on the focused beam. In Clark, for example, the image surface 22 of image sensor 14 is rectangular, and the fact that the Clark aperture filter is circular does not mean that a only a circular area of the imaging surface is used; i.e., the aperture filter is not used to shape a beam.] Also, the Examiner had apparently misinterpreted what is meant by the "pixel pattern" of the electro-optical panel or the image sensor (as the case may be). The term, as commonly used in the art, refers to the pattern in which pixels are arranged and not (as the Examiner argues) to the peripheral shape of the whole electro-optical panel or

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image sensor. In addition to widespread common usage of the term "pixel pattern," the Examiner is referred, for example, to page 8, lines 9-12 of Applicant's Specification, which, in describing the aperture of the high spatial cutoff filter, states:

"The aperture shape preferably matches to the pixel pattern. Typically, this will be square (a specific case of rectangular), hexagonal, or of diamond shape (as for diagonal sampling). Figures 3, 4, and 5 respectively illustrate square, hexagonal, and diamond-shaped apertures 140 or 280."

Certainly, the Examiner is familiar with, for example, a diamond shaped pixel pattern for diagonal sampling, which is in widespread commercial use. The context and description referred to would be clear to anyone skilled in the electronic video display arts.

Near the end of the interview, Primary Examiner Tuan Ho, while emphasizing that no agreement was reached, did indicate that Applicant's point regarding the lack of basis for combining the features of the two citations was well taken, and should be reduced to writing, and this has been done here. Reconsideration of this argument, as well as Applicant's further arguments hereof, will be appreciated.

In the event that such arguments are still deemed unpersuasive, however, Applicant respectfully requests, in light of the technical and operational clarifications presented by Counsel during the interview and in this submission, that the Examiner specifically show why someone skilled in the art would have incentive to use the beam shaping aperture of Kimura in the Clark system, and also why a "pixel pattern" of an electro-optical panel or an image sensor would conceivably be interpreted to be the

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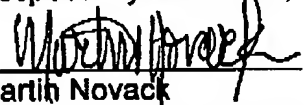
macroscopic outer shape of the device, especially in the context used in Applicant's specification and claims.

In view of the foregoing it is believed that all claims of this application are now in condition for allowance, and such favorable action is respectfully solicited. In the event there are any remaining issues, however, it is asked that the Examiner kindly telephone the undersigned counsel collect so that they can be resolved.

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Respectfully submitted,


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